

-8-

### REMARKS

#### Telephonic Interview

Applicants' attorney thanks the Examiner for the helpful telephonic interview. The Examiner stated in a voicemail on May 25, 2004 that the claims, as amended, (omitting the phrase "immunogenic fragments thereof") would obviate the present rejection.

#### Summary of Amendments to the Specification

Table V has been amended to correct typographical errors. SEQ ID NOs 5 and 6 represent unlipidated C2 (DNA and polypeptide, respectively) rather than unlipidated OspC1, and SEQ ID NOs 7 and 8 represent unlipidated C5 (DNA and polypeptide, respectively) rather than unlipidated OspC2. The Sequence Listing, which contains the nucleotide and amino acid sequences for C2 and C5, was filed concurrently with the application. No new matter has been added.

Table VII has been amended to correct clerical errors. Table VII lists the SEQ ID NOs of OspC constructs including OspC chimeras that were made according to the present invention. The Sequence Listing was filed concurrently with the application; however, some of the polypeptide designations that match the given SEQ ID NOs. were incorrectly stated in Table VII. As described in the application as filed, including Table VII and footnotes, the sequences of Table VII include 3 classes of OspC constructs. These are: 1) nucleic acids encoding unlipidated OspC polypeptides, and the corresponding polypeptide sequences; 2) nucleic acids encoding unlipidated chimeric OspC polypeptides, and the corresponding polypeptide sequences; and 3) nucleic acids encoding chimeric OspC polypeptides having the lipidation signal from OspB, and the corresponding polypeptide sequences. As amended, Table VII describes the same three classes of constructs. The sequences in the Sequence Listing have not changed.

In particular, the amendments to Table VII are as follows:

row 5 has been amended to recite "unlip OspC2-TRO"; row 6 has been amended to recite "unlip OspCB31-TRO"; row 7 has been amended to recite "unlipCPkoCTro"; row 8 has been amended to recite "Blip OspC1C10"; row 9 has been amended to recite "Blip OspC5C7"; row 10 has been amended to recite "Blip OspC2C12"; row 11 has been amended to recite "Blip OspC1C12"; row 12 has been amended to recite "Blip OspC2C10"; row 13 has been amended to recite "Blip

-9-

OspC2C7"; row 14 has been amended to recite "Blip OspC5C12"; row 15 has been amended to recite "Blip OspC2TRO"; row 16 has been amended to recite "Blip OspC5C10"; row 17 has been amended to recite "Blip OspCB31TRO"; row 18 has been amended to recite "Blip OspCB31C10"; row 19 has been amended to recite "Blip OspCB31C12"; and row 20 has been amended to recite "Blip OspCPkoTro". No new matter has been added.

Summary of Claim Amendments

Claims 12-38 and 44-48 have been canceled.

Claims 1-6 have been amended to remove the phrase "immunogenic fragments thereof."

Claim 1 has also been amended to remove item b).

Claims 49-52 have been added. Claim 49 is dependent upon Claim 1 and comprises item b) previously presented in Claim 1. Support for this amendment is found on page 14, lines 26-15:11; and page 34, lines 12-21. Claims 50 and 51 are essentially the same as former Claims 37 and 38, rewritten to depend from Claim 49. Claim 52 is essentially the same as Claim 40, previously canceled in error.

Rejection of Claims Under 35 U.S.C. § 112, First Paragraph

Claims 1-13, 39, and 41-43 stand rejected under 35 U.S.C. § 112, first paragraph.

Claims 1-6 have been amended to remove the phrase "immunogenic fragments thereof," obviating the rejection. Reconsideration and withdrawal of the rejection are respectfully requested.

-10-

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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